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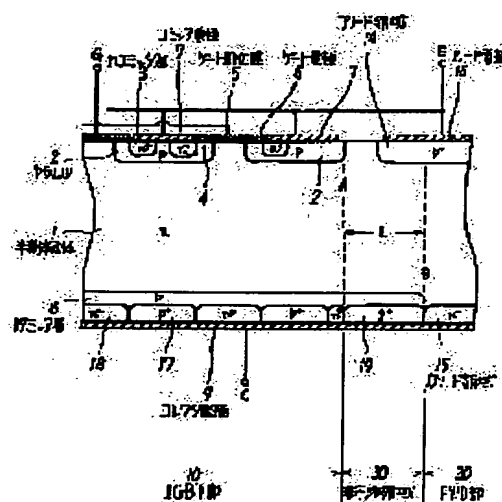
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(54) SEMICONDUCTOR DEVICE

(57)Abstract:

PURPOSE: To enable low-impedance wiring by making an insulated gate type bipolar transistor(IGBT) and a free wheeling diode(FWD) into one chip.

CONSTITUTION: An FWD part 20, which has a p⁺-anode region 14 and an n⁺- region 15, is made on an n-type silicon substrate 1, where an DGBT part 10 having a p-well 2, an n-emitter layer 3, and a p-emitter layer 8 is made, whereby those are made monolithic. An emitter electrode 7 in the IGBT part 10 and the anode electrode 16 in the FWD part 20 and the connection between them are made integrally by Al deposition. What is more, to materialize low inductance, it is effective to fuse or pressure-weld an electrode plate to the anode electrode 16, and at time same time, connect an electrode plate to time collector electrode 9, too, on the other side of the substrate 1. Hereby, low-impedance wiring becomes possible.



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